

REMARKS

In accordance with the foregoing, claims 15-17, 19-22, 27 and 28 have been amended. No new matter has been added. Claims 15-28 are pending and under consideration.

REJECTIONS UNDER 35 U.S.C. §102

In the Office Action, claims 15, 16, 20-22 and 26-28 were rejected as anticipated by U.S. Patent Application Publication 2002/014017 by Li et al. (hereinafter Li).

Independent claim 15 is directed to a cellular radio communications system using a multitude of sub-carriers. The sub-carriers may be allocated to radio cells according to different allocation methods at different times, as described in, e.g., paragraph [0035] of the Substitute Specification. During a first time period, the sub-carriers of the frequency band may be available to each radio cell, as described, e.g., for the first means in paragraph [0024] of the Substitute Specification. To clarify this feature of the invention, claim 15 has been amended to recite that “the sub-carriers of the at least one frequency [are] temporarily available during a first time period to each radio cell for transmission of information” (claim 15, lines 4-5). During a second time period, the sub-carriers are not available to each radio cell, but rather to a subset of the radio cells, as described in, e.g., paragraph [0016] of the Substitute Specification. As amended, claim 15 recites “each of the sub-carriers [are] available to a subset of ... at least two radio cells for the transmission of the information” (claim 15, last 2 lines). Thus, as recited in claim 15, the manner of allocating the radio resources is **dynamic**, as it can change over time between one allocation method and another allocation method.

Independent claims 15, 27 and 28 have been amended to clarify the existence of two methods of allocating the sub-carriers to the radio cells. The feature is emphasized and clarified by the amendments, but it was included in the original claim language by stating that the two operations were performed “temporarily.”

Unlike the method of claim 15, Li teaches an assignment of frequencies that is static over time. As illustrated in Fig. 8, the method taught Li produces a geographical frequency reuse pattern. According to paragraph [0103] in Li, each cell has a hexagonal structure with six sectors using directional antennas at the respective base stations. Between the base stations, the frequency reuse factor is one. The last sentence means that each base station uses the same frequencies as all of the other base stations. No change in the allocation of frequencies to base stations has been found in Li. Therefore, Li does not teach the dynamic allocation of frequencies to radio cells as recited in claim 15.

Additionally, Applicants note that Li is directed to allocation of the sub-carriers (frequencies) to subscribers¹ and not to radio cells as recited in the claims of the subject application.

As discussed above, Li fails to teach or suggest every feature recited in claim 15; therefore, claim 15 is patentably distinct over the prior art. Since claims 16 and 20-22 depend from claim 15 and independent claims 27 and 28 are rejected for similar reasons as claim 15, claims 16, 20-22, 27 and 28 are patentably distinct over the prior art for the reasons discussed above with respect to claim 15. Accordingly, Applicant respectfully traverses and requests reconsideration of the rejection based on Li.²

REJECTIONS UNDER 35 U.S.C. §103

Claims 17-19 were rejected as being unpatentable over Li in view of U.S. Patent No. 6,917,580 B2 to Wang et al. (hereinafter Wang). Claim 23 was rejected as being unpatentable over Li in view of U.S. Patent No. 5,726,978 to Frodigh et al. (hereinafter Frodigh). Claims 24 and 25 were rejected as being unpatentable over Li in view Frodigh and in further view of U.S. Patent Application No. 2002/0082016 by Obayashi (hereinafter Obayashi).

Applicants respectfully submit that none of the additional cited references (Wang, Frodigh and Obayashi) cures the failure of Li to teach or suggest a method for managing radio resources in a radio communications system in which allocation of the sub-carriers is dynamic (i.e., assigned temporarily for a first time using one method and temporarily for a second time using a different method). Therefore, Applicants respectfully traverse the rejections and request reconsideration of the dependent claims that patentably distinguish over the cited prior art at least by inheriting patentability from the independent claims.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

¹ See Li, Abstract, "...method comprises allocating at least one diversity cluster of subcarriers to a first subscriber and allocating at least one coherence cluster to a second subscriber..." (emphasis added).

² See MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added). See also MPEP 2143.03: "All words in a claim must be considered in judging the patentability of that claim against the prior art."

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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